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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,089	02/27/2004	Masayuki Tamai	NY-KIT-366-US	7536

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EXAMINER


TSIDULKO, MARK

ART UNIT PAPER NUMBER

2875

DATE MAILED: 06/10/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 10/789,089	Applicant(s) TAMAI, MASAYUKI 	
	Examiner Mark Tsidulko	Art Unit 2875	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 February 2004.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-9 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 6-9 is/are allowed.
- 6) ☒ Claim(s) 1-5 is/are rejected.
- 7) ☒ Claim(s) 3 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 2/27/2004 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date <u>06/004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION***Drawings***

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the *lateral face of the groove formed as a convex curved face flared open from the bottom face* (claim 3) must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Specification

The disclosure is objected to because of the following informalities: first printed circuit board is indicated by two different reference characters [P2] (pages 9-12) and [Pu] (pages 5, 15-17), second printed circuit board is indicated by two different reference characters [P2] (pages 9-12) and [Po] (pages 15, 16).

Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 1 is rejected under 35 U.S.C. 102(b) as being anticipated by Suckow et al. (US 6,679,618).

Referring to Claim 1 Suckow et al. disclose (Fig.3B) a lighting device including a printed circuit board (PCB) [41] having a plurality of LEDs [15] mounted on a bottom face of the straight grooves, wherein a lateral face of the grooves act as a reflecting face [402] for reflecting beams from the LEDs.

Regarding claim(s) 1 and 6, please note, that the ***method of forming the groove*** is not germane to the issue of patentability of the device itself. Even though the claim(s) are limited by and defined by the recited process, the determination of patentability of the product is based on the product itself, and does not depend on its method of production. If the product in the

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product-by-process claim is the same as or obvious from a product of the prior art, the claim is unpatentable even though the prior product was made by a different process. *In re Thorpe*, 227 USPQ 964, 966 (Fed. Cir. 1985). Therefore, these (i.e. method) limitations has not been given patent weight.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2, 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Suckow et al. (US 6,679,618) in view of Nakamura et al. (US 6,351,594).

Referring to Claim 2 Suckow et al. discloses the instant claimed invention except for that the groove is formed as an inclined face opened from the bottom of the groove.

Nakamura et al. disclose (Fig. 1a) a PCB [3] having a groove [5] formed as an inclined face opened from the bottom of the groove, what allow to obtain wider beam of the reflected light.

Referring to Claim 5 Suckow et al. discloses the instant claimed invention except for red, blue and green LEDs.

Nakamura et al. disclose a linear beam indicator having LEDs of these colors for reading colored images (col.5, lines 56-58).

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Regarding using the lighting unit in a color film scanner, it has been held that a recitation with respect to the manner in which a claimed apparatus is intended to be employed does not differentiate the claimed apparatus from the prior art apparatus satisfying the claimed structural limitations. *Ex parte Masham*, 2 USPQ2d 1647 (1987).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the grooves of the device of Suckow et al. having inclined form, as shown by Nakamura et al. in order to increase illumination.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Suckow et al. (US 6,679,618) in view of Karlicek et al. (US 6,851,831).

Suckow et al. discloses the instant claimed invention except for that a wiring land is formed on the surface of a PCB and the LEDs are connected via bonding wires.

Karlicek et al. disclose (Fig.3) a wiring land [40] on the surface of the PCB and the LEDs are connected via bonding wires (col.1, lines 44-55; col.5, lines 52-56).

It would have been obvious to one having ordinary skill in the art, at the time the invention was made, to provide the bonding wires, as taught by Karlicek et al., for the device of Suckow et al. in order to obtain electrical connection for the LEDs.

Allowable Subject Matter

Claim 3 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

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The following is an examiner's statement of reasons for allowance:

The prior art of record fails to show a PCB having a groove formed as a convex curved face flared open from the bottom of the groove.

Claims 6-9 are allowed.

The following is an examiner's statement of reasons for allowance:

Referring to Claim 6 the prior art of record fails to show a PCB including a first PCB and a second PCB superposed on a top face of the first PCB and having a straight through groove and an array of LEDs mounted on the first PCB inside of the groove of the second PCB, wherein a lateral face of the groove acts as reflecting face for a beam from the LEDs.

Claims 7-9 are allowed as claims depended on claim 6.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mark Tsidulko whose telephone number is (571)272-2384. The examiner can normally be reached on 8 - 5.

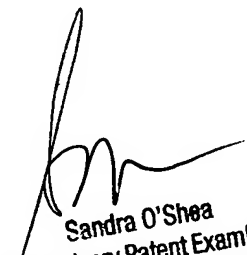
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Sandra O'Shea can be reached on (571) 272-2378. The fax phone number for the

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organization where this application or proceeding is assigned is (703) 872-9306 for all communications.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.T.
April 12, 2005



Sandra O'Shea
Supervisory Patent Examiner
Technology Center 2800